

- A1
- (a) a simulated organ;
  - (b) a simulated instrument for performing the simulated medical procedure on said simulated organ;
  - (c) a locator for determining a location of said simulated instrument within said simulated organ; and
  - (d) a visual display for displaying images according to said location of said simulated instrument within said simulated organ for providing visual feedback, such that said images simulate actual visual data received during an actual medical procedure as performed on an actual subject, said visual display including:
    - (i) a three-dimensional mathematical model for modeling said simulated organ according to a corresponding actual organ, said model being divided into a plurality of segments, said plurality of segments being arranged in a linear sequence;
    - (ii) a loader for selecting at least one of said plurality of segments from said linear sequence for display, said at least one of said plurality of segments being selected according to said location of said simulated instrument within said simulated organ;
    - (iii) a controller for selecting a simulated image from said segment according to said location of said simulated instrument; and
    - (iv) a displayer for displaying said simulated image.
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3. (Amended) The system of claim 2, wherein said texture mapping data comprises animation of random movement of said simulated instrument and random movement of said simulated organ.

Ar Sub B7 4. (Amended) The system of claim 1, wherein said texture mapping data includes images obtained from performing said actual medical procedure on said actual subject.

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**Please add the following new claims 39-44:**

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39. (New) The system of claim 1, wherein said loader further comprises a rapidly accessed memory for storing said segment.

40. (New) The system of claim 1, wherein said mathematical model features a plurality of polygons defined with respect to a spline, said spline determining a geometry of said mathematical model in three dimensions.

41. (New) The system of claim 40, wherein said simulated instrument is an endoscope featuring an endoscope cable, said endoscope cable forming a loop from a movement of said endoscope in said simulated organ, said loop being modeled according to a mathematical model.

A3 42. (New) The system of claim 41, wherein said mathematical model for said loop features a plurality of polygons defined with respect to a spline.

43. (New) The system of claim 42, wherein a size of said loop is determined according to a differential between an amount of said endoscope cable within said simulated organ and a length of said simulated organ from an entry point of said endoscope to a current position of said endoscope within said simulated organ.

44. (New) A system for performing a simulated medical procedure, comprising:

(a) a simulated organ;

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- (b) a simulated instrument for performing the simulated medical procedure on said simulated organ;
  - (c) a locator for determining a location of said simulated instrument within said simulated organ; and
  - (d) a visual display for displaying images according to said location of said simulated instrument within said simulated organ for providing visual feedback, such that said images simulate actual visual data received during an actual medical procedure as performed on an actual subject, said visual display including:
    - (i) a three-dimensional mathematical model for modeling said simulated organ according to a corresponding actual organ, said model being divided into a plurality of segments, said plurality of segments being arranged in a linear sequence;
    - (ii) a loader for selecting at least one of said plurality of segments from said linear sequence for display, said at least one of said plurality of segments being selected according to said location of said simulated instrument within said simulated organ;
    - (iii) a controller for selecting a simulated image from said segment according to said location of said simulated instrument;
    - (iv) a displayer for displaying said simulated image;
  - (v) a texture mapping database for storing texture mapping data, said texture mapping data comprising at least one of animation of random movement of said simulated instrument and random movement of said simulated organ; and
  - (vi) a texture mapping engine for overlaying said simulated image with said texture mapping data substantially before said simulated image is displayed by said displayer.